STATION 3b

Land Use – Transportation Links

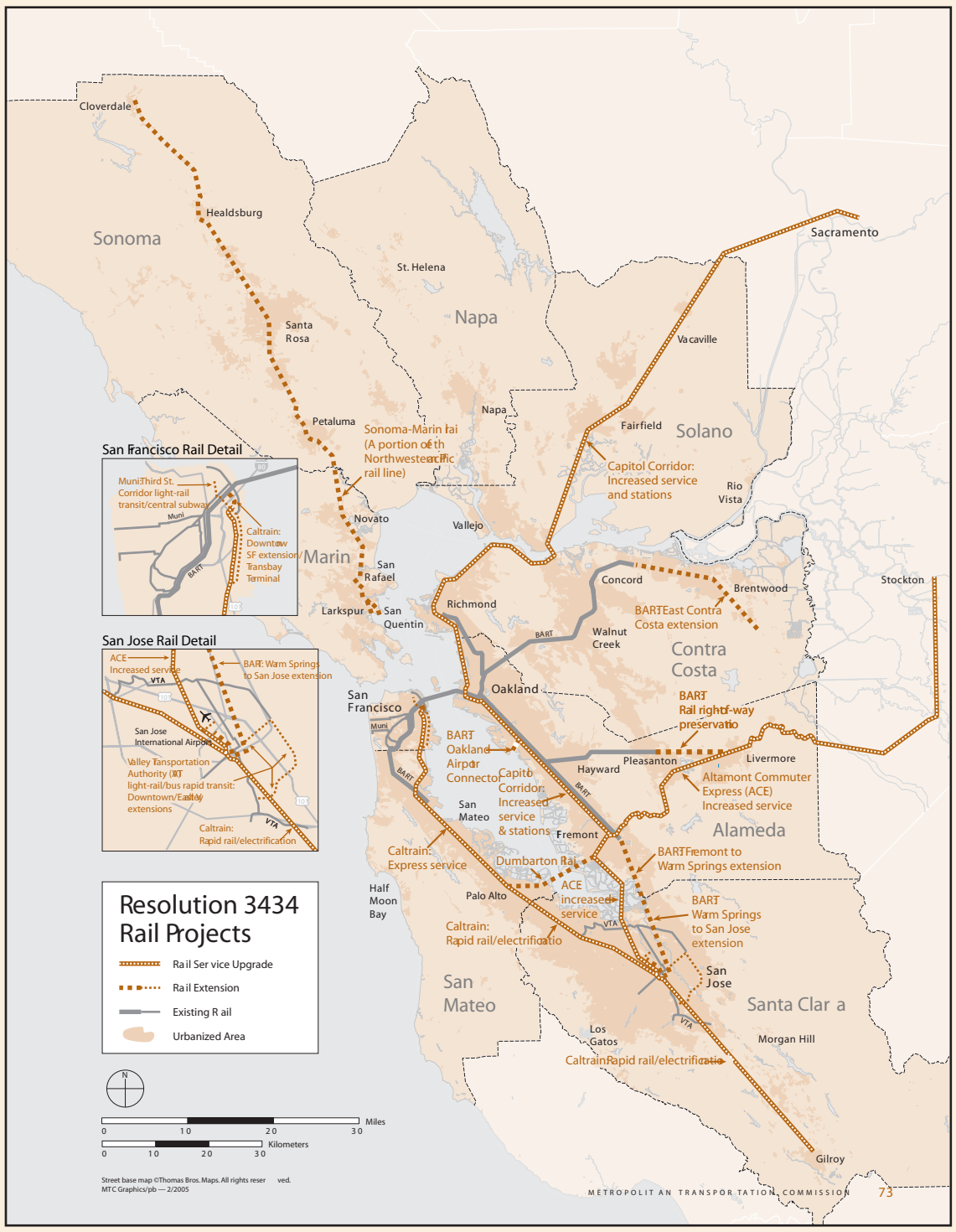
A RAIL PRIMER

Base Network

The study team will develop a "base network" of current rail infrastructure and planned rail projects that can reasonably be financed and built over the next 25 years. Rail service expansions and extensions identified in MTC's Resolution 3434 Regional Transit Expansion Program will be included in the base network. Similarly, planned rail projects with identified funding included in long-range transportation plans from neighboring regional planning agencies will also be included.

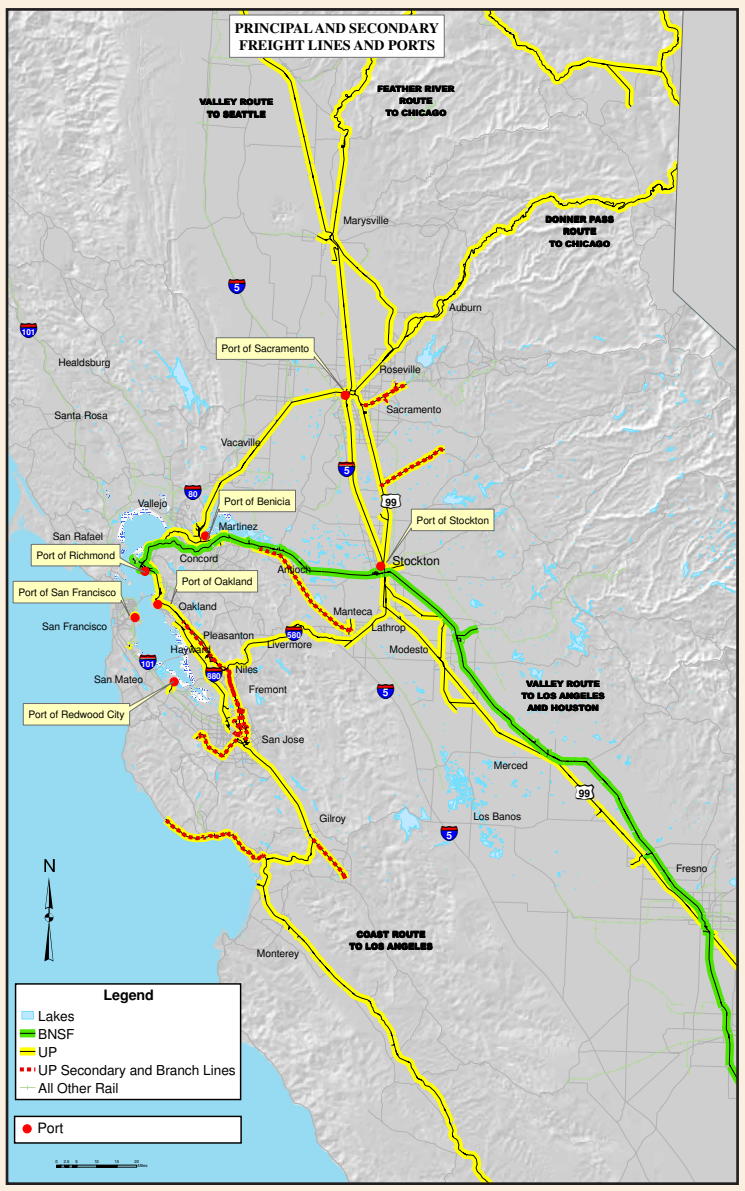
Resolution 3434: The Bay Area's Vision for Transit Expansion

MTC's Regional Transit Expansion Program, adopted in 2001 as Resolution 3434, identifies nine new rail extensions, significant service expansions to existing rail lines, and a comprehensive regional express bus program, new ferry service, plus eight enhancement programs to existing rail and bus corridors. Once implemented, this next generation of transit expansion projects will forge key transit network connections between southern Alameda County and the Silicon Valley, provide a new southern link, enhance the Bay Area's central transit hub in San Francisco, and extend the reach of rail to the North Bay and the outer East Bay.



Planned Rail Projects Outside the Bay Area

There are six other metropolitan planning organizations in the study area besides MTC, including the Sacramento Area Council of Governments (SACOG), the San Joaquin Council of Governments (SJCOG), the Stanislaus Council of Governments (StanCOG), San Benito Council of Governments, the Transportation Agency for Monterey County (TAMC), and the Santa Cruz County Regional Transportation Commission (SCCRTC). All except Santa Cruz County have new or upgraded rail projects listed in their long-range plans.



Freight and Ports

The study area is served by two major freight railroads: Burlington Northern Santa Fe (BNSF), and Union Pacific (UP). The railroads have three gateways for transcontinental service to the Midwest and South. The Union Pacific's Feather River and Donner Pass routes link Sacramento and Chicago. Both UP and BNSF travel through the San Joaquin Valley and cross Tehachapi Pass to reach Southern California, Texas, and the Midwest. UP also has a route through the Sacramento Valley to Seattle, and the Coast Route to Los Angeles. The Port of Oakland is the largest port served by the freight rail network. Other ports are located along the Bay and the eastern and northern edges of the Delta.

Not All Trains Are the Same

There are several different types of technologies used for rail vehicles. Some public transit vehicles, such as trains used by BART, are not compatible with railroad operations. The Altamont Commuter Express (ACE), Caltrain and the Capitol Corridor use heavier equipment compatible with freight trains. Due to safety concerns, the Federal Railroad Administration (FRA) ordinarily does not grant permission for lighter-weight trains to operate on the same tracks as heavier-weight freight and passenger trains.

When passenger and freight trains share tracks, all vehicles must generally be heavier, “FRA-compliant vehicles" that meet stringent structural requirements. Lighter weight, “non-FRA-compliant vehicles" would not be allowed to operate on tracks while freight and passenger trains are in operation.

Federal–Compliant Vehicles

Heavier-weight vehicles that cannot share tracks with lighter-weight vehicles

Freight Train Union Pacific, Burlington Northern Santa Fe
- Diesel Powered
- General Maximum Operating Speed: 70 mph



Altamont Commuter Express (ACE)
- Diesel Powered
- General Maximum Operating Speed: 80 mph


Capitol Corridor/ San Joaquins
- Diesel Powered
- General Maximum Operating Speed: 80 mph


Caltrain
- Diesel Powered
- General Maximum Operating Speed: 80 to 90 mph



Amtrak
- Diesel Powered
- General Maximum Operating Speed: 80 mph


Commuter Train
- Self-Propelled Diesel Powered
- General Maximum Operating Speed: 80 mph


Non-Federal–Compliant Vehicles

Lighter-weight vehicles that cannot share tracks with heavier-weight vehicles

High Speed Rail: Germany – ICE, France – TGV, Japan – Shinkansen
- Overhead Electric Powered
- General Maximum Operating Speed: 200+ mph



Commuter Train
- Overhead Electric Powered
- General Maximum Operating Speed: 70–120 mph

Commuter Train
- Diesel Powered
- General Maximum Operating Speed: 70–110 mph


BART
- Third Rail Electric Powered
- General Maximum Operating Speed: 75 mph